

S/549/62/000/110/002/004
E192/E382

AUTHORS: Lebedev, Ye.N. and Pakhomov, I.I., Candidates of Technical Sciences

TITLE: Optical simulation of the relative motion of objects in space

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. [Trudy] no. 110. 1962. Opticheskiye i optiko - elektronnyye pribory. 60 - 67

TEXT: Some theoretical problems of simulating the angular rotations of the object under observation in an optical simulator system are considered. The simulator is based on the method of epidiascopic projection of a model of the object under observation onto the screen of a training device. The model of the object under observation has a "suspension" system, as shown in Fig. 1. The model can rotate about any of the three axes which intersect at its centre of gravity. The coordinate system $O^{x_M}_M y^M z^M$ is attached to the model. The relative positioning of the suspension system, the optical projector and the screen are illustrated in Card 1/4

Optical simulation of

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Fig. 2, where the centre of the screen \exists coincides with the origin of the coordinate system $Ox_1y_1z_1$ attached to the controlled object (the operator's cabin) which can be regarded as fixed. The suspension system is arranged so that the point of intersection of the rotation axes of the model coincides with the centre of the screen; on the other hand, when the optical axis of the projector Ox_{17} coincides with the axis Ox_1 and the rotation angles of the model are zero relative to the suspension axes, the coordinate system $Ox_My_Mz_M$, the intersection point coincides with the coordinate system $Ox_1y_1z_1$. The position of the two bodies relative to a fixed coordinate system $Ox_3y_3z_3$ is defined by three angles: the angle of pitch ψ , the angle of bank γ and the angle of yaw ψ . The directional cosines of the axes of the controlled object in the coordinate system $Ox_1y_1z_1$ and the object under observation in the coordinates $Ox_2y_2z_2$ relative to the fixed coordinate system $Ox_3y_3z_3$ are

Card 2/4

Optical simulation of

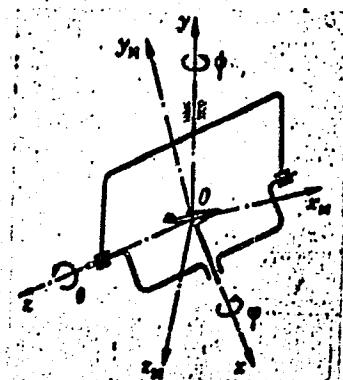
S/549/62/000/110/002/004
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determined in terms of the angles of pitch, bank and yaw for the two objects. The directional cosines between the axes of the $Ox_1y_1z_1$ and $Ox_2y_2z_2$ systems are also determined and the cosines of the angles between the axes of the fixed system in the coordinates $Ox_1y_1z_1$ and the coordinate system $Ox_{MM}y_{MM}z_{MM}$ are found (see Fig. 2). These cosines can be expressed in terms of the rotation angles of the projector. The position of the model $Ox_{MM}y_{MM}z_{MM}$ relative to the coordinate system $Ox_{MM}y_{MM}z_{MM}$ is determined by using the Euler angles: the angle of precession Ψ , the nutation ϑ and the rotation angle φ . The rotation angles of the model of the object under observation with respect to the three suspension axes can be determined, provided the cosines between the coordinate transformation axes (axes of the system $Ox_2y_2z_2$) and the axis of the coordinate system $Ox_{MM}y_{MM}z_{MM}$ are known. There are 5 figures.

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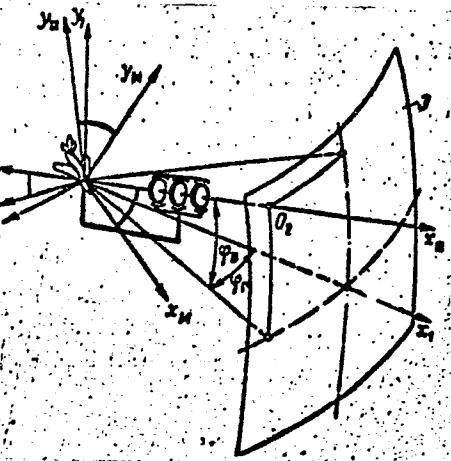
Optical simulation of

Fig. 1:



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Fig. 2:



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LEBEDEV, Ye.P., kand.med.nauk

Hemorrhage from the ear in chronic suppurative inflammation
with parapharyngitis. Vest. otorin. 21 no.3:85-86 My-Je
'59. (MIRA 12:9)

1. Iz kliniki bolezney ukh, gorla i nosa Stalingradskogo
meditsinskogo instituta.

(OTITIS MEDIA, compl.

parapharyngitis with hemorrh. from ear in
chronic suppurative otitis (Rus))

(PHARYNGITIS, compl.

parapharyngitis with hemorrh. from ear in
chronic suppurative otitis media (Rus))

LEBEDEV, E. P.

K voprosu o probleme pasazhirskikh perevozok Moskovskogo zheleznychornogogo uzla. / The problem of passenger traffic in Moscow junction/. (Sots. transport, 1934, no.3, p. 55-52).

LCC: HE7.S6

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

LEBEDEV, E. P.

Uporiadochit' sistemu perspektivnogo planirovania zheleznodorozhnoego transporta.
/To put in order the system of planning in railroad transportation/. (Sots. transport, 1934, no. 8, p. 98-102).

DLC: HE7.S6

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

LEBEDEV, E. P.

Razvitiye dorozhnogo khoziaistva Moskovskoi oblasti v tret'em piatiletii. /Road development in the Moscow Province in the third five-year plan/. (Doroga i avtomobil', 1937, no. 9, p. 6-8).

DLC: TE4.D6

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929030009-9

LEBEDEV, Ye.P.

[Transportation statistica] Transportnaya statistika. Moskva,
Gosstatizdat, 1953. 334 p. (MLRA 7:3)
(Transportation--Statistics)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929030009-9"

PETROKANSKIY, Boris Ivanovich; LEBEDEV, Ye.P., red.; KHITROV, P.A.,
tekhn.red.

[Statistical accounting for railroad stations] Statisticheskii
uchet na stantsii. Moskva, Gos.transp.zhel-dor.izd-vo, 1959.
106 p. (MIRA 12:12)
(Railroads--Accounts, bookkeeping, etc.)

YAKUBOV, Lev Sergeyevich; LEBEDEV, Ye.P., red.; BOBROVA, Ye.N.,
tekhn.red.

[Fundamentals of railroad statistics] Osnovy zhelezodorozhnoi
statistiki. Izd.2., perer. Moskva, Gos.transp.zhel-dor.izd-vo,
1959. 267 p.
(Railroads--Statistics)

LEBEDEV, Ye.P., dots.; CHIRSKIY, G.M., dots.; VALAKHANOVICH, A.I.; FARAFALOV, G.Ya., red.; NIKOL'SKAYA, K.G., tekhn. red.

[Statistics of passenger transportation] Statistika perevozok passazhirov; uchebnoe posobie po distsiplinam "Zheleznodorozhnaia statistika" i "Osnovy statisticheskogo i bukhgalterskogo ucheta na zheleznodorozhnom transporte" dlia studentov IV kursa spetsial'nosti "Ekonomika i organizatsiia zheleznodorozhного transporta" i V kursa spetsial'nosti "Ekspluatatsiia zheleznykh dorog." Moskv , 1962. 21 p. (MIRA 15:12)

1. Moscow. Vsesoyuznyy zaochnyy institut inzhenerov zheleznodorozhnogo transporta.

(Railroads--Passenger traffic) (Railroads--Statistics)

MITKALEV, B.A.; LEBEDEV, Ye.P.; NOVIKOVA, T.A.

Purification of phenol waste waters by adsorption on activated carbons. Nefteper. i neftekhim. no.11:13-15 '64 (MIRA 18:2)

1. Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv, Ufa.

LIEBED'V, Ye.V., Cand Chem Sci-- (disc) "Chemical
molecular carbohydrates of ^h Chamomile (Devonian) petroleum." Lom, 1953.
10 pp; 2 pp of ^{diagrams} (Acad Sci USSR. Inst of Petroleum), 160 co-
pies (KL,46-98, 138)

- 12 -

L_EB_ED_EU, 4_E. V.

9(1); 11(1) - PEACE & ECONOMIC DEVELOPMENT NOV/7/2021

Academy of Sci., Institute of

Trudy, t. 12 (Transactions of the Petroleum Institute, USSR). Academy of Sciences, Vol. 12, Moscow, Izd. v AN SSSR, 1958. 355 p. Errata slip inserted. 1,700 copies printed.

M. I. Serebryakov, Professor; Ed.: K. G. Myasnikov; Tech. Ed.: V. V. Golubeva.

PURPOSE: This book is intended for scientists, engineers, and technicians in the petroleum industry.

CONTENTS: This collection of articles describes the results of studies on the chemistry and technology of petroleum and gas conducted in the Laboratories of the Petroleum Institute, Academy of Sciences, USSR, in 1956 and 1957. A new section "Synthesis and Technology of Petroleum" has been included. Synthesis and Technology of Petroleum has been included in the collection of articles. A list of symposia publications published by the Institute's laboratories in 1956 and 1957 and a list of dissertations for the Doctor's and Candidate's degrees presented in 1956 and 1957 at open sessions of the Academic Council of the Petroleum Institute, Academy of Sciences, USSR, are given. No. Yu. Rababov, V. V. Koren'yanov, I. A. Mironov, and V. V. Shchelkin, Change in the Activity of Silica Gel in the Chromatographic Separation of Hydrocarbons

35

Gol'dberg, G. D., M. M. Raskin, Ye. S. Polkovnikov, and N. A. Smirnov, Study of the Absorption Spectra of Some Cyclohexyl and Cyclopentyl Benzenes. Derivatives in the Near Ultraviolet Region

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Serebryakov, S. R., N. Ya. Semenchenko, and B. F. Mandel. Investigation of the Composition and Properties of High-Molecular Weight Hydrocarbons and Tars of Oily-Gum Petroleum

65

Serebryakov, S. R., N. E. Davydov, A. D. Litmanovich, and V. A. Shchelkin. Some Pyrolytical Properties of Petroleum Asphaltene and Tar Solutions. Part 1a

76

Serebryakov, S. R., and Yu. F. Gordalin. Composition and Properties of the Tar Fraction of Radishkino Petroleum. Part 15

83

Serebryakov, S. R., and Yu. F. Gordalin. Low-Temperature Transformations of High-Molecular-Weight Aromatic Hydrocarbons of Radishkino Petroleum. Part 16

88

Serebryakov, S. R., and I. A. Moshikina. Chemical Nature of Saturated High-Molecular-Weight Hydrocarbons of Radishkino (Novosibirsk) Petroleum. Part 17

102

Serebryakov, S. R., and Yu. V. Lebedev. Chemical Nature of Saturated High-Molecular-Weight Hydrocarbons of Radishkino (Novosibirsk) Petroleum. Part 18

117

Serebryakov, S. R., and A. A. Mikhalevich. The Chemical Nature of High-Molecular-Weight Saturated Aromatic Hydrocarbons of Radishkino (Novosibirsk) Petroleum. Part 19

136

Serebryakov, S. R., I. A. Moshikina, and Yu. V. Gordalin. Investigation of the Chemical Nature of High-Molecular-Weight Condensed Aromatic Compounds of Tar Isolated from Radishkino Petroleum. Part 20

147

Serebryakov, S. R., Ye. V. Moshikina, and I. A. Moshikina. Hydrogenation of High-Molecular-Weight Condensed Diaromatic Aromatic Compounds of Radishkino Petroleum in the Presence of a W₂ - Mn - Al₂O₃ Catalyst under Mild Conditions. Paper 21

156

Serebryakov, S. R., Ye. V. Moshikina, and Ye. V. Gordikina. Hydrogenation of Tars Isolated from Radishkino Petroleum. Paper 22

168

Serebryakov, S. R., V. I. Korshakina, P. M. Galich, L. I. Butman, B. Z. Davydov, and M. I. Kravchikov. Effect of the Depth of Selective Cracking on the Composition and Properties of Heavy Residual Petroleum Fraction. Part 23

173

Serebryakov, S. R., V. I. Korshakina, P. M. Galich, L. I. Butman, B. Z. Davydov, and M. I. Kravchikov. Effect of the Nature of the Raw Material and Oxidation Time on the Composition and Properties of Gidized Bitumens. Article 24

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(1)

5(3)

AUTHORS: Sergiyenko, S. R., Lebedev, Ye. V.,
Petrov, A. A. SOV/20-123-4-36/3

TITLE: Selective Catalytic Dehydrogenation of Saturated High-Molecular
Hydrocarbons in Liquid Phase (Izbiratel'naya kataliticheskaya
degidrogenizatsiya predel'nykh vysokomolekulyarnykh uglevodorodov
v zhidkoy faze)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4,
pp 704 - 706 (USSR)

ABSTRACT: The reaction discovered by Zelinskiy (Ref 1) has not yet
been used for the purpose mentioned in the title, as far as
it can be judged from references. Its usefulness in studying
the structure of high-molecular petroleum hydrocarbons had
to be checked by the authors. Synthetic hydrocarbons C₂₀-C₃₂
were used which contain 1-3 cyclohexane-, 2-Dekalin-, 1-cyclo-
pentane nuclei and 1 paraffin hydrocarbon of normal structure.
First, the optimum conditions of the dehydrogenation mentioned
in the title were determined and the apparatus required was
constructed (Fig 1). Pt on charcoal was used as catalyst

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Selective Catalytic Dehydrogenation of Saturated High- SOV/2c-123-4-36/53
Molecular Hydrocarbons in Liquid Phase

(according to Ref 2). To explain the behaviour of the hydrocarbons of various structure the following individual compounds were synthesized: n-tetracosane, n-octadecyl cyclopentane, 7-cyclohexyl octadecane, 1,5-dicyclohexyl-3-heptyl pentane, 1,5-dicyclohexyl-3-hexahydro benzyl pentane, 1,2-di-(1,3,5-trimethyl cyclohexyl)ethane, 2,11-didecahydro naphthyl dodecane, 1,1-dicyclohexyl dodecane. In the investigation the author found that the dehydrogenation of the individual hydrocarbons, which are the homologs of cyclohexane and Decalin, takes place already at 280°. In the liquid phase the optimum temperature is 315-320°. At that temperature the dehydrogenation of all investigated hydrocarbons which contain isolated as well as condensed hexamethylene structures, is as a whole finished within 5-6 hours, with practically no cracking taking place. Figure 2 shows the change of the hydrogen separation and of its total amount in the course of time. The reaction temperature amounted in all cases to 315°. Table 1 shows the results of the catalytic dehydrogenation of the hydrocarbons and their mixtures. The increase of the number of hexamethylene nuclei and the occurrence of methyl groups in them has only little effect

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Selective Catalytic Dehydrogenation of Saturated High- SOV/20-123-4-36/53
Molecular Hydrocarbons in Liquid Phase

on the dehydrogenation. Two condensed hexamethylene groups render this process more difficult. By interrupting this experiment it was proved that the dehydrogenation of the cyclohexyl nuclei takes place in both directions at the same time: a) Of both nuclei. b) Of only one nucleus. The role of the cyclization by dehydrogenation is unimportant. The above investigation has shown that the method of investigating fractions of the mentioned petroleum hydrocarbons with cycloparaffin nuclei as mentioned in the title may be used successfully for the detailed characterization of their chemical structure. There are 2 figures, 1 table and 2 Soviet references.

ASSOCIATION: Institut nefti Akademii nauk SSSR (Petroleum Institute, Academy of Sciences, USSR)
PRESENTED: July 18, 1958, by A. A. Balandin, Academician
SUBMITTED: June 17, 1958

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LEBEDEV, Ye. V.

НОВЫЕ ДАННЫЕ
О СТРУКТУРЕ ВЫСОКОМОЛЕКУЛЯРНЫХ
УГЛЕВОДОРОДОВ НЕФТИ
G. P. Сергиева, Е. В. Лебедев, А. А. Михеевская

VIII Mendeleev Congress for General and Applied Chemistry in
Section of Chemistry and Chemical Technology of Fuels,
publ. by Acad. Sci. USSR, Moscow 1959
Abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 15 March 1959.

SERGIYENKO, Semen Romanovich. Prinimali uchastiye: SKLYAR, V.T.; GORDASH, YU.T.; MAYOROV, L.S.; ZHDANOVA, N.V.; DAVYDOV, B.E.; LEBEDEV, Ye.V.; TETERINA, M.P.; L'VOVA, L.A., vedushchiy red.; TROFIMOV, A.V., tekhn.red.

[High molecular weight compounds in petroleum] Vysokomolekuliarnye soedineniya nefti. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 412 p. (MIRA 12:12)
(Petroleum--Analysis) (Macromolecular compounds)

LEBEDEV, Ye. V.

S/165/59/000/04/02/026

AUTHORS: Sergiyenko, S.R., Lebedev, Ye.V. and Mikhnovskaya, A.A.

TITLE: On the Structure of High Molecular Hydrocarbons in Petroleum //

PERIODICAL: Izvestiya Akademii nauk Turkmenской SSR, 1959, No. 4, pp. 10 - 23

TEXT: The article reviews the chemical properties of high molecular hydrocarbons in petroleum as presented in the Section of Chemistry and Technology of Fuel at the 8th Mendeleyev Congress on March 17, 1959 in Moscow. Investigation of chemical and technical properties of these hydrocarbons is important in view of their proposed use as raw materials for synthetic products during the current Seven-Year Plan. Data contained herein have been obtained from 15 different types of Soviet petroleum. The Romashkin, Tuymazin, Baylin, Gyurgyan and other petroleums contain about 40% high molecular hydrocarbons, in heavier petroleum they frequently exceed 50%. To eliminate chemical changes, vacuum was used for distillation of fractions up to 325-350°C, at a maximum temperature of 250°C. Chromatographic fractionation was carried out with coarse-pored activated silica gel (ASK). The group composition of high molecular hydrocarbons and their paraffin-cycloparaffinic (PCP), monocyclic aromatic (MCA) and bicyclic aromatic (BCA) hydrocarbon contents in various types of petroleum is shown in Table 1. The main components of high

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On the Structure of High Molecular Hydrocarbons in Petroleum
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molecular hydrocarbons are Paraffin-cycloparaffinic hydrocarbons with high hydrogen content (40-60%), bicycloaromatic hydrocarbons with low hydrogen content, and the medium group are definitely monocyclic aromatic hydrocarbons. The differences in chemical properties of petroleum are particularly evident in composition and properties of paraffin-cycloparaffinic hydrocarbons, as far as the determination of their chemical properties remains limited to their reaction in forming a complex compound with carbamide. Distribution of carbon atoms of various chemical properties in similar groups of hydrocarbons extracted from Soviet petroleum is shown in Table 2. The question about chemical properties of cycloparaffinic rings and the relation of hexamethylene and pentamethylene rings in the molecules of paraffin-cycloparaffinic hybridic structures remained unsolved. Number of cyclo-paraffin-cycloparaffinic hydrocarbons, monocyclo-aromatic and paraffinic and benzene rings in paraffin cycloparaffinic, monocyclo-aromatic and bicyclo-aromatic hydrocarbons extracted from various types of petroleum is shown in Table 3. Groups and properties of paraffin-cycloparaffinic hydrocarbons, monocyclic aromatic petroleum and bicyclic condensed aromatic hydrocarbons are shown in Tables 4, 5 and 6. Results of a three-stage fractionated dehydrogenation are given in Table 7. It shows that the relation of hexamethylene and pentamethylene rings in the Romashkin (Devon) petroleum varies from 1-1.5. Properties and structure of paraffin-cycloparaffinic hydrocarbons extracted from 3 fractions ✓

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On the Structure of High Molecular Hydrocarbons in Petroleum

of paraffin cycloparaffinic hydrocarbons are shown in Table 8. Oxidation of benzene homologues in 30 hours at 97-99°C is shown in Table 9 and oxidation of hybridic hydrocarbons C₂₀-C₂₄ in 100 hours at 97-99°C is given in Table 10. The degree of oxidation of benzenecarboxylic acids i.e. oxalic and carboxylic acids in 30 hours at 97-99°C is shown in Table 11. The oxidation and infra-red spectroscopy method showed that among high molecular monocyclic hydrocarbons of the Romashkin (Devon) petroleum trisubstituted benzenes are predominant. Tests proved that sulphur contained in high molecular fractions is constitutionally connected with aromatic compounds accompanying bicycloaromatic hydrocarbons. There are 10 tables and 1 diagram.

ASSOCIATION: Institut geologii i razrabotki goryuchikh iskopayemykh Akademii nauk SSSR (Institute of Geology and Processing of Combustible Minerals at the AS USSR)

SUBMITTED: July 11, 1959

✓

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14(5)

SOV/165-59-5-2/21

AUTHORS: Sergiyenko, S.R., Lebedev, Ye.V.TITLE: High-molecular N-paraffin Hydrocarbons¹ ($C_{21} - C_{30}$) of the Ro-
mashkin (Devon) Petroleum

PERIODICAL: Izvestiya Akademii nauk Turkmenskoy SSR, 1959, Nr 5, pp 16-19 (USSR)

ABSTRACT: The authors describe a method of study of high-molecular hydro-
carbons in Romashkin (Devon) petroleum. This method, based on
the chromatographic fractionation of hard hydrocarbons, was de-
veloped by V. Fuks [Ref 1]. Characteristics of solid hydro-
carbon fractions, forming a complex compound¹ with carbamide (1)
and not forming a complex compound with carbamide (2) and liquid
hydrocarbon fractions forming a complex compound with thiocar-
bamide (3) and not forming a complex compound with thiocarbamide
(4) are shown on Table 1. The scheme of extraction and cracking
process of high molecular hydrocarbons is shown in a graph (Page
16 a). By simultaneous use of ASK type silicagel, activated
carbon and activated alumina as adsorbents, further dichloro-
ethane, hexane, petroleum ether (50 - 70°), acetone, benzene,
ether and their compounds as substitutes, ten individually classi-
Card 1/3

High-molecular N-paraffin Hydrocarbons (C_{21} - C_{30}) of the Romashkin (Devon) Petroleum

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fied paraffin hydrocarbons C_{21} - C_{30} were obtained from Roma-shkin petroleum. The fractionation of solid, high-molecular hydrocarbons in a 3-section chromatographic column, showing the number of fraction, n_D^{10} , concentration and processing temperature is given on Graph 1. The quantitative distribution of N-paraffin hydrocarbons in the fraction of solid high-molecular hydrocarbons forming a complex compound with carbamide, showing the yield, processing temperature, carbon atoms in the molecule and T^0 of initial high-molecular hydrocarbons with a complex compound formed by carbamide, is given on Graph 2. The results containing the number and extent of fractions, gram and percent of yield, total yield, n_D^{10} , T^0 pl. (melting temperature) and the derived products are shown on Table 2. It was proved,

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High-molecular N-paraffin Hydrocarbons ($C_{21} - C_{30}$) of the Romashkin (Devon)
Petroleum

SOV/165-59-5-2/21

that with increase of the molecular weight of N-paraffin hydrocarbons, their quantity in the petroleum decreases. There are 2 tables, 2 graphs and 2 references, one of which is Soviet and one German.

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SERGIYENKO, S.R.; LEBEDEV, Ye.V.; PETROV, A.A.

Selective catalytic dehydrogenation of saturated high molecular weight hydrocarbons in the liquid phase. Trudy Inst.nefti 13:145-160 '59.
(Hydrocarbons) (Dehydrogenation) (MIRA 13:12)

LEBEDEV, YE. V.

PHASE I BOOK EXPLOITATION

SOV/4726

Kiev: Gosudarstvenny nauchno-issledovatel'sky i proyektnyi in-
stitut upol'noy rudoy, neftyanoy i gazuoy promyslennosti
Mauchyrskiy, 1971. Dobychni i pererabotka naftei Sci-
entific Reports of the State Scientific Research and Project
Institute for the Coal, Mining, Oil and Gas Industry No.
1: Extraction and Processing of Petroleum) Kiev, 1960. 91
p. 1,000 copies printed.

Sponsoring Agencies: UkrSSR Gosudarstvennaya planovaya komissiya
Soveta Ministrov Gosudarstvenny nauchno-issledovatel'skiy
proektnyi institut upol'noy, rudoy, neftyanoy i gazuoy
promyslennosti "Ukniliproekt." Kiev, 1960.

Editorial Council: V. P. Kamenov, S. Ye. Anshul'm, S. I. Bilynskiy,
V. Ye. Volchanskiy, D. I. Gol'tsau, V. S. Grinstejn (Kreps),
S. P. Goryainov, M. N. Zhebrak (Chairman),
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Stavik, and V. V. Tarasov; Rep. Ed. for this Collection: V. T. Sklyarov, Candidate of Chemical Sciences; Ed.: A. Novik.

Card 1/5

PURPOSE: This collection of articles is intended for petroleum

researchers, engineers, and refiners.

COVERAGE: The collection of articles deals with the production
and refining of petroleum. Individual articles discuss the
under dissolved gas conditions, the effect of pressure on the
viscosity of declassified petroleum, the structure of high-mole-
cular petroleum hydrocarbons, the asphaltene and tar compo-
nents of Carpathian crudes and menite shale asphalt, and the
aliphatic composition of alcohols produced by sulfite hydro-
genation of CO and H₂. Products of synthesis. Other articles
describe the carbide dewaxing method for filtration of wax dis-
tilates or flotation processes with the use of
oxidized petroleum, and the investigation of alkylbenzenes by means of
infrared absorption
spectra. The remaining articles also on the relations of pressure-
volume-temperature relationships and on the phase equilibrium in
ethylene-methane, ethylene- γ -hexene, and ethylene-benzene
systems. Specific volumes and compression coefficients at

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PETROLEUM REFINING

Sergienko, S. R., Ye. V. Lebedev, and A. A. Mukhomorov. On
the Structure of High-Molecular-Hydrocarbons of Petroleum. On
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Sklyar, V. T., A. P. Litozub, A. P. Mal'nev, and G. A. Butkov-
skaya. Study of Six-Membered Aromatic and Naphthenic Hy-
drocarbons by Infrared Absorption Spectra. 25

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Sklyar, V. T., I. M. Santsova, T. G. Sokolova, and N. V. Afref'yev.
Asphaltene and Tar Components of Some Carpathian Petroleums and
Asphalts of Menite Shales. 30

30

Sabirova, G. V., O. M. Shapovalov, and V. N. Karaseva. Pro-
duction of an Effective Flotation Agent Based on Oxidized Pe-
troleum. 55

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Zhurba, A. S., and T. P. Zhuba. Comparison of the Ethylene-
Benzene, Ethylene-Cyclohexene, and Ethylene- γ -hexene Systems by
the P-V-T Pressure-volume-temperature-molar fraction of
ethylene in the mixture Relations and Phase Equilibrium
Zhuba, T. P., and A. S. Zhuba. Specific Volumes and Com-
pression Coefficients of the Hexane-Ethyline System in the
Interval of Pressure to 150 atm and Temperature of 30-150°C. 68

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S/710/60/000/001/001/004
D055/D113

AUTHORS: Sergiyenko, S.R.; Lebedev, Ye.V.; Mikhnovskaya, A.A.

TITLE: The structure of high-molecular oil hydrocarbons

SOURCE: Kiyev. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy
institut ugol'noy, rudnoy, neftyanoy i promyshlennosti.
Nauchnyye zapiski, no. 1, 1960. Dobycha i pererabotka nefti.
13-24

TEXT: An account of the chemical structure of high-molecular oil hydrocarbons, based on experimental data obtained mainly in the USSR, is given. It was found that oil hydrocarbons, which contain 20 and more carbon atoms in the molecule, consist mainly of hybrid structures. Only paraffinic hydrocarbons are an exception, their content rarely reaching 10%. High-molecular hydrocarbons are an important part of oil (30-50%) and determine its basic composition and properties. The paraffino-cycloparaffinic hydrocarbons, which are richest in

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D055/D113

The structure of ...

hydrogen, as a rule form the basic part (40-60%) of the high-molecular hydrocarbons; dicyclic-aromatic hydrocarbons are poorest in hydrogen; in between both as regards hydrogen-saturation and proportion to the other groups, are the monocyclic-aromatic hydrocarbons. The differences in the chemistry of oils are seen most clearly in the composition and properties of paraffino-cycloparaffinic hydrocarbons. In oils of different structure, 50-70% of the carbon atoms in the molecules of high-molecular hydrocarbons form paraffinic carbon. Liquid-phase dehydrogenation on platinized coal can be used as a method of selective dehydrogenization of hexamethylene rings. In high-molecular paraffino-cycloparaffinic hydrocarbons of Romashkino (Devonian) oil, the ratio of hexa- and penta-methylene rings varies - 1:1-1.5. Tri-substituted derivatives of benzene (the position of the substitutes in the benzene ring is 1,3,5- and 1,2,4-) predominate among the high-molecular monocyclic-aromatic hydrocarbons of Romashkino oil; mono-substituted and 1,4-di-substituted benzenes were found in small quantities, but no 1,2- and 1,3-di-substituted samples were found. Sulfur contained in

Card 2/3

S/710/60/000/001/001/004
D055/D113

The structure of ...

the high-molecular part of oil is constitutionally linked with aromatic compounds, which mostly accompany dicyclic-aromatic hydrocarbons. There are 11 tables.

Card 3/3

SERGIYENKO, Semen Romanovich; LEBEDEV, Yevgraf Venediktovich; ARTYKOVA, T.V.,
red. izd-va; FLUTKOVA, S.G., tekhn. red.

[Selective catalytic dehydrogenation of high molecular weight
hydrocarbons] Izbiratel'naia kataliticheskaiia degidrogenizatsiia
vysokomolekuliarnykh uglevodorodov. Ashkhabad, Izd-vo Akad.nauk
Turkmenskoi SSR, 1961. 71 p. (MIRA 14:12)
(Hydrocarbons) (Dehydrogenation)

SKLYAR, Vladimir Tikhonovich; LEBEDEV, Yevgraf Venediktovich; .
PREDTECHENSKAYA, N.F., red.; MATUSEVICH, S.M., tekhn. red.

[Petroleums of the Ukraine; composition and properties] Nefti
Ukrainy; sostav i svoistva. Kiev, Gos.izd-vo tekhn.lit-ry
USSR, 1962. 298 p. (MIRA 15:7)
(Ukraine--Petroleum--Analysis)

11.0130

AUTHORS:

Sklyar, V. T., Lebedev, Ye. V., Lizogub, A. P., Zhurba, A. S.,
Perekrest, A. N., Lebedeva, I. B., Baranovskiy, M. I.

TITLE: Some ways of a more rational reprocessing of paraffin
petroleums of Western Ukraine

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1961, 467, abstract
24M63 (Nauchn. zap. Gos. n.-i. i proyektn. in-t ugol'n.
rudn. neft. i gaz. prom-sti "Ukrainiprojekt", no. 4, 1961.
87 - 112)

TEXT: Results are presented of a study of a possibility of deepest and
most rational exploitation of the petroleums of Dolinskoye and Bitkovskoye
deposits which are characterized by a high content of light oils
(Dolinskoye: 54.4%, Bitkovskoye: 43.1%), high paraffin content (16 and
17%, respectively), and low content of sulfur (0.35 - 0.55%). Thorough
investigations of the Dolinskiye petroleums showed that in the
dissolution of diesel fuel fraction by selective solvents at low
temperatures, 100% paraffin hydrocarbons can be separated which

Card 1/2

32334

S/081/61/000/024/066/086

B102/B108

Some ways of a more rational...

are a valuable raw material for the petrochemical industry. The quantity separated is 17 - 20% per fraction or 3.5 - 4.1% per petroleum. Deparaffinization of the fractions corresponds to the demands of the FOT (GOST) for diesel summer fuel and special fuel. At low temperatures solid paraffin hydrocarbons were separated in quantities of 28% per fraction or 8% per petroleum by means of selective solvents from the distilled fraction of medium paraffin petroleum. From the deparaffinized part petroleum components of high viscosity can be obtained. From the distilled fraction of heavy paraffin petroleum solid hydrocarbons (33% per fraction), as well as diesel and tractor oils with a viscosity index of 87 can be obtained. High-quality residual oils (~2.8% per petroleum) and ceresins (~0.7% per petroleum), as well as improved-quality bitumens can be obtained from the petroleum asphalts. A possibility of obtaining gas-turbine fuel, plasticizers for rubber and low-sulfur coke is shown.

[Abstracter's note: Complete translation.]

Card 2/2

SKLYAR, V.T., kand.khimicheskikh nauk; LEBEDEV, Ye.V., kand.khimicheskikh nauk; LIZOGUB, A.P., inzh.; ZHURBA, A.S., inzh.; PEREKREST, A.N., inzh. LEBEDEVA, L.B., inzh.; BARANOVSKIY, M.I., inzh.

Some ways of more efficient refining of Western Ukrainian paraffin oils. Nauch.zap.Ukrniiproekta no.4:87-112 '61. (MIRA 15:1)
(Ukraine, Western--Petroleum--Refining)

LEBEDEV, Ye.V., inzh.

Assembly of precast reinforced concrete tanks. Mont. i spets.
rab. v stroi. 24 no.9:12-16 S '62. (MIRA 15:9)

1. Gosudarstvennyy institut po proyektirovaniyu spetsial'nykh
sooruzheniy promyshlennogo stroitel'stva.
(Precast concrete construction) (Petroleum--Storage)

L 19865-65 EWT(m)/EPF(c)/EWP(j) PC-4/PR-4 AEDC(b)/SSD/ESD/AFWL/APGC(b)/ESD(gs)/
ESD(t) RM/MLK ACCESION NR AM5001004 BOOK EXPLOITATION 26B S/

Sklyar, Vladimir Tikhonovich (Candidate of Chemical Sciences); Lebedev,
Yevgraf Venediktovich (Candidate of Chemical Sciences); Zakupra, Vadim
Aleksandrovich (Candidate of Technical Sciences)

Higher monoolefins (Vysshie monoolefiny), Kiev, Izd-vo "Tekhnika", 1964,
281 p. illus., biblio. 1,800 copies printed.

TOPIC TAGS: higher monoolefin, chromatography, infrared spectroscopy, mass spectroscopy

PURPOSE AND COVERAGE: This book covers the problems of obtaining monoolefins with five and more carbon atoms and their use for alcohol synthesis, washing substances, plastics plasticizers, synthetic resins, oil additives, high quality special lubricants, etc. The methods of studying olefin-containing carbon mixtures, especially the methods of gas-liquid and liquid chromatography, infrared spectroscopy, mass spectroscopy, etc. are examined in detail. The book is intended for researchers, engineers, and technicians in the petrochemical and oil refining industries and can also be useful for students and graduate students specializing in petrochemical synthesis.

TABLE OF CONTENTS [abridged]:

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L 19865-65
ACCESSION NR AM5001004

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Ch. I. Obtaining higher monoolefins of hydrocarbons -- 5
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Ch. III. Use of higher monoolefins -- 140
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SUB CODE:OC

SUBMITTED: 14Apr64

NR REF Sov: 245

OTHER: 272

DATE ACQ: 30Nov64

Card 2/2

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929030009-9

PLIYEV, T.N.; LIZOGUB, A.P.; LEBEDEV, Ye.V.; BROVIN, I.L.

Quantitative determination of aromatic hydrocarbons using infrared spectroscopy. Neft. i gaz. prom. no.4:46-48 O-D '64
(MIRA 18:2)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929030009-9"

ACCESSION NR: AP4043279

S/0065/64/000/008/0021/0026

AUTHOR: Zakupra, V. A.; Lebedev, Ye. V.; Manza, I. A.

TITLE: The effect of chemical treatment on the structure and adsorption property of silica gels with different trade marks

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 8, 1964, 21-26

TOPIC TAGS: silica gel, industrial silica gel, silica gel separation effectiveness, displacement chromatography, silica gel chemical treatment, hydrocarbon group separation, chromatographic hydrocarbon analysis

ABSTRACT: The effect of chemical treatment (with HCl and H₂O₂) of industrial silica gels ASM, KSM, ASK, and of silica gels with a given pore radius KSM-6, KSS-4, KSK-2, on the effectiveness of their separation of various synthetic mixtures of paraffinic, mono-olefinic, and aromatic hydrocarbons was studied by means of displacement chromatography. The use of displacement chromatography for analytical determination of the group composition of cracking or dehydrogenation products has made it possible to decrease the total volume of the

Card 1/5

ACCESSION NR: AP4043279

mixture to be studied as a result of a decrease in the volume of the desorption fraction used in identification. Thus, a decrease in the volume of the mixture to be analyzed decreases the consumption of silica gels. It is noted that this method is advantageous for a series of determinations, since the size of the apparatus dimensions and the time needed for analysis are also decreased. The characteristics of the individual hydrocarbon fractions separated are given in Table 1 of the Enclosure. To determine the effect of chemical treatment of silica gels on the effectiveness of separation of various hydrocarbon mixtures, silica gels with various porous structure (treated and untreated chemically) were used. It was found that the best properties for separating benzene, n-heptane and 2-heptene (mixture 1), and isopropyl benzene, n-octane, and 1-octene (mixture 2) were possessed by ASM, KSM, and KSS-4 silica gels which had been treated chemically. For separation of α -methylnaphthalene, n-hexadecane, and 1-hexadecene (mixture 3), the most effective agents were KSS-4 and ASK silica gels which also had been chemically treated. KSM-6 silica gel clearly showed the effect of chemical treatment, and its separation effectiveness for mixtures of 1 and 2 approached that of

Card 2 / 5

ACCESSION NR: AP4043279

ASM, KSM, and KSS-4. The activity determination of the silica gels used in the separation of benzene showed a decrease of 4 to 5 units for fine, porous silica gels which had been chemically treated. This decrease in activity is explained by a decrease in the specific surface on which the process of absorption of benzene depends. A sharper decrease in the specific surface (from 590 to 470 m²/g) as a result of chemical treatment occurred in ASM silica gel. From the differential curve of the distribution of pore sizes or the effective radii of the silica gels used, it was concluded that the effective pore radius of chemically treated KSS-4 silica gel is 21 to 27 Å greater than that of the untreated gel. For ASM silica gel with a larger pore size, the change is characterized by an increase in the number of large pores. It was concluded that the separating ability of KSK-2 silica gel, which consists of large pores and has decreased ability to separate mixtures of high-molecular particles. The most effective silica gel with medium pore size was KSS-4. Thus, it was established that chemical treatment leads to changes in the porous structure of silica gels by increasing the pore size and decreasing the specific surfaces. Orig. art. has 5 figures and 2 tables.

Card 3/5

ACCESSION NR: AP4043279

ASSOCIATION: UkrNIIgiproneft'

SUBMITTED: 00

ATD PRESS: 3080

ENCL: 01

SUB CODE: MT, GC

NO REF Sov: 007

OTHER: 003

Card

4 / 5

ACCESSION NR: AP4043279

Table 1. Characteristics of individual starting hydrocarbons

ENCLOSURE: 01

Compound	Boiling Point °C* (760 mm of Hg)	Refractive Index np	Density	Synthetic Mixture of Hydrocarbons % by volume
Benzene	80.0—80.5	1.5010	0.8790	33.5
n-Heptane	97.5—97.9	1.3875	0.6833	33.2
2-Heptane	imported, not distilled	1.4094	0.7108	33.3
Isopropyl benzene	149.9—151.7	1.4908	0.8635	33.4
n-Octane	124.3—125.0	1.3972	0.7027	33.3
1-Octene	imported, not distilled	1.4089	0.7150	33.3
α-Methylnaphthalene	68.9—70.3 (4 mm pm. cm.)	1.6148	1.0232	37.7
n-Hexadecane	108.3—108.5 (3.5 mm pm. cm.)	1.4345	0.7740	31.3
1-Hexadecene	imported, not distilled	1.4412	0.7811	31.0

*Individual hydrocarbons were distilled in a fractionation column with an effectiveness of 20—22 theoretical plates

5/5

Card

SKLYAR, V.T.; LEBEDEV, Ye.V.; ZAKUPRA, V.A.

Dehydrocracking of paraffins over sulfide catalysts. Nefte-
khimiia 4 no.2:200-208 Nr-Ap'64 (MIRA 17:8)

Thermocatalytic conversion of paraffins over oxy catalysts.
Ibid.:209-214

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy insti-
tut neftyanoy i neftechimicheskoy promyshlennosti "Ukrniigiproneft!",
Kiyev.

ACCESSION NR: AP4032515

8/0204/64/004/002/0209/0214

AUTHOR: Sklyar, V. T.; Lebedev, Ye. V.; Zakupra, V. A.

TITLE: Thermocatalytic transformation of paraffins on oxide catalysts

SOURCE: Neftekhimiya, v. 4, no. 2, 1964, 209-214

TOPIC TAGS: paraffin dehydrocracking, olefin production, α olefin production, thermocatalytic cracking, oxide catalyst, MoO_3 sub 3 NiO Al sub 2 0 sub 3 catalyst, WO_3 NiO Al sub 2 0 sub 3 catalyst, $\text{Cr}_2\text{O}_3/\text{Fe}_2\text{O}_3$ catalyst, isomerization, disproportionation, aromatization, condensation, catalyst regeneration, economics, conversion rate

ABSTRACT: Liquid olefins were obtained in 35-45% yield from paraffins by dehydro-cracking with oxide catalysts (MoO_3 - NiO - Al_2O_3 , WO_3 - NiO - Al_2O_3 , $\text{Cr}_2\text{O}_3/\text{Fe}_2\text{O}_3$) at temperatures of 550-590°C. The paraffin crude, obtained from diesel oil by complexing with carbamide, typically contained 0.06% aromatics, and 40 wt.% C_{16} - C_{18} n-paraffins. At 550°C increasing the feed rate reduced the yield; at 590°C, the reverse obtains and high yields were obtained at a space velocity of 3 hours⁻¹. To obtain a relatively high α -olefin-containing product the conversion should be

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ACCESSION NR: AP4032515

limited to 30-40% at high temperatures and space velocities, simultaneously recirculating the unconverted portion of the crude and inert diluents. Side reactions such as isomerization, disproportionation of hydrogen, aromatization and condensation are more prevalent with these oxide than with sulfide catalysts. However, the former are cheaper and may be regenerated more easily. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanoy i neftekhimicheskoy promyshlennosti "Ukrniigiproneft" g. Kiyev.
(State Scientific Research and Planning Institute of the Petroleum and Petro-
chemical Industry)

SUBMITTED: 24Apr63

SUB CODE: FP, OC

NO REF SOV: 002

ENCL: 00

OTHER: 000

2/2

L 41165-55 EWT(m)/EWP(t)/EWP(b) IJP(e) JD.

S/0286/65/000/003/0041/0041

ACCESSION NR: AP5007171

14

AUTHOR: Lebedev, Ye. V.; Sklyar, V. T.; Perekrest, A. N.; Gordash, Yu. T.; Zakupra, V. A.; Kal'chenko, V. M.; Gyul'misaryan, T. G. B

TITLE: A method for producing highly aromatized material for making carbon black. 17
Class 23, No. 167933

SOURCE: Byulleten' izobreteniya i tovarnykh znakov, no. 3, 1965, 41

TOPIC TAGS: carbon black, aromatic compound

ABSTRACT: This Author's Certificate introduces a method for producing highly aromatized material for the production of carbon black. The material is made from petroleum byproducts by using redistillation to isolate the hydrocarbon fraction which contains the aromatic compounds. This fraction is then extracted by furfural or phenol. In order to provide a wider choice of materials, coke distillate is used as the petroleum byproduct. The 240-460°C fraction is isolated from the distillate.

ASSOCIATION: none

Card 1/2

Submitted: 18 JAN 64

KARIMOV, A.K.; AVAZMATOV, Kh.B.; LEBZIN, Ye.V.

Luminescence study of bitumens contained in Mesozoic sediments
in the Mubarek oil and gas region. Neftegaz. geol. i geofiz.
no.4:30-35 '65. (MIRA 18:7)

1. Institut geologii i razrabotki neftyanykh i gazovykh
mestorozhdeniy AN UzSSR.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929030009-9

ZAKUPRA, V.A.; LEBEDEV, Ye.V.; MANZA, I.A.

Chromatographic analysis of the cracking and dehydrogenation products
of paraffin hydrocarbons. Khim. i tekhn. topl. i masel 10 no.2:28-34
(MIRA 18:8)
F '65.

1. UkrNIIGIPRONEFT'.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929030009-9"

LEBEDEV, Yu. (Riga)

Experimental determination of energy dispersion in riveted beams
with flitch plates. Vestis Latv ak no.1:41-46 '61.
(EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut avtomatiki i mekhaniki.
(Girders) (Plates)

LEBEDEV, Yu.

Plant and city. Sov. profsoiuzy 19 no.18:30-32 S '63.
(MIRA 16:12)

1. Starshiy arkhitektor Nauchno-issledovatel'skogo instituta teorii
i istorii arkhitektury i stroitel'noy tekhniki, Moskva.

LEBEDEV, Yu. A., SURIKOVA, V. V., SURIKOV, M. P., (USSR)

"Effect of Mercaptocompounds on the Biochemical Aspects
of Atherosclerosis and Oxidative Processes of the Body."

Report presented at the 5th Int'l. Biochemistry Congress,
Moscow, 10-16 Aug 1961.

SURIKOV, M.P.; SMIRNOVA, G.V.; LEBEDEV, Yu.A.; MOROZKINA, T.S.

Influence of sulphhydryl compounds on some biochemical indexes in
experimental atherosclerosis. Farm. i toks. 24 no.5:586-591 S-O
'61. (MIRA 14:10)

1. Kafedra biokhimii (zav. - doktor meditsinskikh nauk M.P.Surikov)
Vitebskogo meditsinskogo instituta.
(MERCAPTO COMPOUNDS) (ARTERIOSCLEROSIS)

LEBEDEV, Yu.A.; APIN, A.Ya.

Calculation of the heat of explosion. Izv. AN SSSR. Otd. khim.
nauk no. 3:555-556 Mr '63. (MIRA 16:4)

1. Institut khimicheskoy fiziki AN SSSR.
(Explosives)

VASIL'YEV, B.I.; LEBEDEV, Yu.A.

Making ingot molds on conveyors. Lit. proizv. no.2:40-41 F
'63. (MIRA 16:3)
(Ingot molds) (Molding (Founding))

Rebelev, Yu.

1421 TT 429
THE DECOMPOSITION OF ARYL DIAZONIUM FLUORIDE BY BORATES AS A METHOD OF OBTAINING PURITY

Author: M. M. Abrosimov
Published: 1971
Issued by G. Belkov (G. Belkov) - 1971
1971-6-1971

No abstract or other part available in NSA files.
Abstracted in NSA 4-72-1-A-4

PM *[Signature]*

LEBEDEV, Yu. A.

USSR/Chemistry

Card 1/2 Pub. 22 - 19/47

Authors : Panchenkov, G. M; Moyseyev, V. M.; and Lebedev, Yu. A.

Title : The decomposition of aryl diazonium fluoroborates as a method of obtaining pure boron fluoride

Periodical : Dok. AN SSSR 100/6, 1103-1106, Feb 21, 1955

Abstract : The content of SiF_4 in BF_3 obtained through the decomposition of phenyl-diazonium fluoroborates was determined by the mass-spectrometric method. It was found that BF_3 contains less SiF_4 than BF_3 obtained by conventional methods from ordinary reagents.

Institution : The M. V. Lomonosov State University, Moscow

Presented by: Academician A. V. Topchiev, September 25, 1954

Periodical : Dok. AN SSSR 100/6, 1103-1106, Feb 21, 1955

Card 2/2 Pub. 22 - 19/47

Abstract : The BF_3 obtained through decomposition of fluoroborates can be used in many cases in the form of a pure gas but for some purposes its purity was found to be insufficient. Four references: 1 USSR, 1 English, 1 USA and 1 German (1937-1953).

Lebedev, Yu.A.

PANOVENKOV, G.M.; MOISEYEV, V.D.; LEBEDEV, Yu.A.

Separation of boron isotopes by thermal diffusion. Zhur. fiz. khim.
30 no.10:2348-2352 0 '56. (MLRA 10:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova
(Boron--Isotopes)

20-114-4-38/63

Apin, A. Ya., Lebedev, Yu. A.
Explosion Decomposition of Hexogen (O vzryvchatom razlozhenii
 geksogena)

AUTHORS:
 TITLE:

PERIODICAL:
 ABSTRACT:

Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 819-821
 (USSR)
 In a number of investigations it has been pointed out that the explosive decomposition reaction is dependent on the compactness of the cover, the quantity and kind of initiator, the strength of the cover, the quantity and kind of charge. The action of these factors is to a considerable extent ascribed to the pressure change in the front of the detonation wave and to the pressure of pressure upon the equilibrium reactions: $2\text{CO} \rightleftharpoons \text{CO}_2 + \text{C} + 41.2 \text{ kcal.}$; $\text{Co} + \text{H}_2 \rightleftharpoons \text{C} + \text{H}_2\text{O} + 31.4 \text{ kcal.}$ $\text{H}_2\text{O} + \text{CO} \rightleftharpoons \text{CO}_2 + 9.7 \text{ kcal.}$ The change in explosion heat and volume of the gaseous explosion products has been determined with a negative oxygen balance for trotyl, tetryl, picric acid and a number of other explosives. For hexogen (cyclo trimethylene trinitramine), however, the explosion heat is cited with the assumption that it is independent of the explosion conditions, especially of the compactness of the charge. At a total explosion the maintenance of the constant charge solidity is of essential importance. The

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APPROVED FOR RELEASE: 08/31/2001

20-114-4-38/63

Explosion Decomposition of Hexogen

authors proved experimentally that the explosion heat of hexogen increases with an increasing solidity of charge. In the experiments a hexogen charge 30-50 g of weight and 20-30 mm of diameter, was placed into a cylindrical cover of copper and suspended in the middle of a calorimetric steel bomb. The air was removed before the explosion. Tab. 1 records the explosion heat of hexogen in dependency of the charge solidity. This dependency is of linear character. The reaction of the explosive transformation, therewith also the explosion heat, furthermore the volume and the composition of the explosion products are highly dependent on the original firmness of the explosive. The above-mentioned heat is no constant of the explosive. An alteration of charge solidity entails a change in volume and composition of the explosion products of the hexogen. Solid carbon was detected among the latter. The most important conclusion from the present work is that in the narrow zone of the detonation wave the equilibrium processes in the explosion products have time to stabilize to a high degree. The equilibria formed within the longer period of the expansion of the explosion products, however, do not have time to displace themselves essentially in an opposite direction, which means that an extremely strong "hardening" (stabilization) of the equilibria takes place.

Card 2/3

76-32-4-14/43

AUTHORS: Apin, A. Ya., Lebedev, Yu. A. Nefedova, O.I.

TITLE: The Nitrogen Reactions in Explosions (Reaktsii azota pri vzryve)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 4,
pp. 819 - 824 (USSR)

ABSTRACT: Since nitrogen is a constituent of the most important explosives, and in the explosion enters reactions with other elements, these are investigated calorimetrically according to the explosion heats. The investigations were carried out with hexogen, plumbic acid, hydrazide and mixtures of these with Al, Be, B, Mg and Zn; here investigations already carried out showed analogous results to those by A. R. Ringbom (Reference 1), K.K. Andreyev and P. L. Gyunter. An addition of metals strongly increases the explosion heat as the formed nitrogen reacts with the metal under formation of the nitride, in which case the explosion heat increases linearly with the increase of the amount of metal till to a certain point in order then to

Card 1/3

The Nitrogen Reactions in Explosions

76-32-4-14/43

decrease again. In the experiments with aluminum the dependence on the degree of dispersion and the number of aluminum particles was observed. From the results of the formation heats given in a table, compared to the data of references can be seen that in accordance to the coincidence, the formation heats can be determined in explosions of nitrides as a linear function between the heat formation and the content of metal partly exists. It is noticed that the metal addition increases the capacity for performing work of the explosives only to a certain limit, as the latter depends on the specific volume of the explosion gas products. The experiments carried out with explosion mixtures of hexogene with aluminum or beryllium in the calorimetric cylinder, the results of which are graphically shown, indicate that the metal enters a chemical reaction with all gas products of the explosion, as there are carbon monoxide and nitrogen, and that in consequence of this an additional heat formation is observed. In the case of hydrazinic acid a strong change of the maximal explosion heat was measured, in which case hydrogen and nitrogen are predominant in the explosion product at the lower value, and ammonia

Card 2/3

The Nitrogen Reactions in Explosions

76-32-4-14/43

and nitrogen at the higher value. There are 4 figures,
2 tables and 7 references, 5 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut khimicheskoy fiziki Moskva
(Moscow Institute for Chemical Physics, AS USSR)

SUBMITTED: December 15, 1956

AVAILABLE: Library of Congress

1. Explosives--Calorimetric analysis 2. Nitrogen--Chemical
reactions

Card 3/3

PHASE I BOOK EXPLOITATION

SOV/5501

Kalinin, Nikolay Georgiyevich, Yuriy Alekseyevich Lebedev, Volga Ivanovna
Lebedeva, Yakov Gilelevich Panovko, and German Ivanovich Strakhov

Konstruktsionnoye dempfirovaniye v nepodvizhnykh soyedineniyakh (Structural
Damping in Stationary Joints) Riga, Izd-vo AN Latviyskoy SSR, 1960. 169 p.
Errata slip inserted. 2,000 copies printed

Sponsoring Agency: Akademiya nauk Latviyskoy SSR. Institut avtomatiki i
Mekhaniki

Ed. (Title page): Ya. G. Panovko, Corresponding Member, Academy of Sciences Latvian SSR, Professor, Doctor of Technical Sciences; Ed. : A. Vengranovich; Tech. Ed. : Ye. Piladze.

PURPOSE: This book is intended for research scientists and engineers concerned with structural mechanics.

Card 1/5

SOV/5501

Structural Damping in (Cont.)

COVERAGE: The book presents the results of research and experiments in the field of structural damping. Experimental problems are discussed only to the extent necessary to support theoretical deductions. Sections 6 and 7 were written by N. G. Kalinin; Sections 12, 14, 15, 16, by Yu. A. Lebedev; Sections 8 and 9, by V. I. Lebedeva; Introduction, Sections 1, 13, 18, and the Conclusion, by Ya. G. Panovko; Sections 2 and 3, by G. I. Strakhov; Section 17 was written jointly by N. G. Kalinin and Yu. A. Lebedev; Ya. G. Panovko and G. I. Strakhov wrote Sections 4, 5, 10, 11, 19-21. There are 42 references: 35 Soviet, 6 English, and 1 German.

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Structural Damping in (Cont.)

PART I. SYSTEMS WITH FRICTION COUPLINGS

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SOV/5501

Structural Damping in (Cont.)

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Structural Damping in (Cont.)

SOV/5501

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AVAILABLE: Library of Congress

AC/dwm/bm

8-14-61

Card 5/5

LENNIKOV, A.M.; POLIN, Yu.K.; LEBEDEV, Yu.A.

Some results of using the decrepitation method. Soob. DVFAK SSSR
no. 12:25-30 '60. (MIRA 13:11)

1. Dal'nevostochnyy filial imeni V.L. Komarova Sibirsckogo otdeleniya
AN SSSR. (Heat of formation) (Minerals)

40388
S/020/62/145/006/012/015
B106/B144

11.2223
11.1250 AUTHORS: Lebedev, Yu. A., Miroshnichenko, Ye. A., and Chaykin, A. M.

TITLE: Formation heat of ethyl and n-butyl lithium

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 6, 1962, 1288-1289

TEXT: The combustion heat of ethyl and n-butyl lithium was determined and the formation heat was calculated from it. Combustion took place in isothermal calorimeters in an oxygen atmosphere. The mean combustion heats are: ethyl lithium 415.4 ± 1.3 kcal/mole, butyl lithium 721.5 ± 1.7 kcal/mole. No noticeable amounts of Li_2O_2 or Li_2CO_3 were found in the combustion products of ethyl lithium. An analysis of the combustion products of n-butyl lithium showed that combustion was complete. Data on the formation heat of the combustion products Li_2O , H_2O , and CO_2 (U.S. Nat. Bur. Stand. Circ. no. 500. Selected Values of Chemical Thermodynamic Properties, Washington, 1952) were used to calculate the formation heat of ethyl lithium: -14.0 ± 1.3 kcal/mole, and of n-butyl lithium: -32.0 ± 1.7 kcal/mole. The stability of the C-Li bond is calculated to be 47.5 ± 1.5 kcal/mole in ethyl lithium and 55.5 ± 2.4 kcal/mole in n-butyl lithium.

Card 1/3

S/020/62/145/006/012/015
B106/B144

Formation heat of ethyl and ...

assuming that lithium alkyls in gaseous state are monomolecular. The formation heat of atomic lithium (37.07 kcal/mole), and of the radicals C_2H_5 (24.3 kcal/mole) and C_4H_9 (12 kcal/mole), and the sublimation heat of ethyl lithium (27.9 ± 0.2 kcal/mole) required for this calculation, were taken from T. L. Cottrell (The Strength of Chemical Bonds, London, 1958), A. M. Chaykin (ZhFKh, 36, no. 1, 130 (1962)), N. N. Semenov (O nekotorykh problemakh khimicheskoy kinetiki i reaktsionnoy sposobnosti (Some problems of chemical kinetics and reactivity), Izd. AN SSSR, 1958)). The sublimation heat of n-butyl lithium (25.6 ± 0.7 kcal/mole) was calculated from the temperature dependence of the saturated vapor pressure between 60 and 95°C. Recently, ethyl lithium in gaseous state has been shown to consist of equal parts of hexamer and tetramer associates. For the final determination of the stability of the C-Li bond it is also necessary to subtract the association heat of these compounds from the above-mentioned values. There are 2 tables. The most important English-language references are: P. A. Fowell, C. T. Mortimer, J. Chem. Soc., 1961, 3793; R. West, W. Glau, J. Am. Chem. Soc., 83, no. 17, 3580 (1961); J. Berkowitz, D. Bafus, T. L. Brown, J. Phys. Chem., 65, no. 8, 1380 (1961). X

Card 2/3

Formation heat of ethyl and ...

3/020/62/145/006/012/015
B106/8144

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

PRESENTED: April 23, 1962, by V. N. Kondrat'yev, Academician

SUBMITTED: April 14, 1962

Card 3/3

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929030009-9

APIN, A.Ya. (Moskva); VELINA, N.F. (Moskva); LEBEDEV, Yu.A. (Moskva)

The efficiency of explosions. PMTF no.5:96-106 S-0 '62.
(MIRA 16:1)
(Explosions)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929030009-9"

S/062/63/000/003/013/018
B101/B186

AUTHORS: Lebedev, Yu. A., and Apin, A. Ya.

TITLE: Calculation of the explosion heat

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 3, 1963, 555 - 556

TEXT: A simple method for calculating the explosion heat of explosives is suggested. (a) If the oxidant and the fuel in the explosive are in a stoichiometric ratio rendering possible the formation of H_2O and the oxidation of C to CO_2 the relation holds: $Q_{expl} = (110n + 95p + 94m) 1000/M$ kcal/kg, where n is the number of the nitrate groups, p is the number of the nitro groups, m is the number of the nitroamino groups, M is the molecular weight. (b) If the oxidant content of the explosive is smaller, thus calculated shows good agreement in g/cm^3 . Comparison of the Q values of explosives such as nitroglycerin, erythritol tetranitrate, mannitol hexa-

Card 1/2

Calculation of the ...

S/062/63/000/003/013/018
B101/B186

nitrate, trinitrobenzene, tetryl, dipentaerythritol hexanitrate, tri-nitrophenol, dinitrobenzene and others. There is 1 table.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: October 2, 1962

Card 2/2

LEBEDEV, Yu.A.; LIPANIN, G.G.; PEPEKIN, V.I.; APIN, A.Ya.

Thermochemical study of individual explosives and their
compositions. Vzryv. delo no.52/9:80-90 '63.

(MIRA 17:12)

1. Institut khimicheskoy fiziki AN SSSR.

L 6991-65 EWT(m)/EPF(c)/EPR/EWP(q)/EWP(b) Pr-4/Ps-4 AEDC(b) JD/JW
ACCESSION NR: AP4034591 S/0076/64/038/004/1024/1026

AUTHOR: Pepkin, V. I.; Dykmova, T. N.; Lebedev, Yu. A.; Apin, A. Ya. *b*

TITLE: Heat of formation of magnesium hydride *v* *v*

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 4, 1964, 1024-1026

TOPIC TAGS: magnesium hydride, heat of formation, heat of combustion, enthalpy of formation

ABSTRACT: The heat of formation of magnesium hydride synthesized from magnesium and hydrogen was determined using a calorimeter equipped with coil piping for rapidly heating the liquid. The heat of combustion of two samples (one containing 76.8% MgH₂, 22.02% Mg, 1.15% MgO and the other 94.88% MgH₂, 3.08% Mg and 2.04% MgO) were determined. ΔH°_{298} for the reaction MgH₂ + O₂ = MgO + H₂O is -190.5 ± 0.9 kcal/mol for the first sample and -190.4 ± 0.4 kcal/mol for the purer sample. The average value for the enthalpy of formation of MgH₂ was calculated $\Delta H^{\circ}_{298} = -21.71 \pm 0.65$ kcal/mol or -90.83 ± 2.72 kilojoules/mol. "The authors thank Prof. S. M. Skuratov for discussing the work." Orig. art. has: 1 figure and 2 tables.

Card 1/2

L 6991-65
ACCESSION NR: AP4034591

ASSOCIATION: Institut khimicheskoy fiziki, Akademiya nauk SSSR (Institute
of Chemical Physics, Academy of Sciences SSSR)

SUMMITTED: 25Jun63 ENCL: 00 SUB CODE: UC, IC
NO REF Sov: 003 OTHER: 002

Card 2/2

MIROSHNICHENKO, Ye.A.; LEYKO, V.P.; LEBEDEV, Yu.A. (Moscow)

Semimicrocalorimeter. Zhur. fiz. khim. 38 no.4:1054-1055 Ap '64.
(MIRA 17:6)
1. Akademiya nauk SSSR, Institut khimicheskoy fiziki.

L 41916-66

CAT(m)/CP(1)

RM/45/TH/GRD

ACC NR: AP6015090

(A)

SOURCE CODE: UR/0020/66/168/001/0104/0105

38
PAUTHOR: Lebedev, Yu. A.; Rozantsev, E. G.; Kalashnikova, L. A.; Lebedev, V. P.
Neyman, M. B.; Apin, A. Ya.

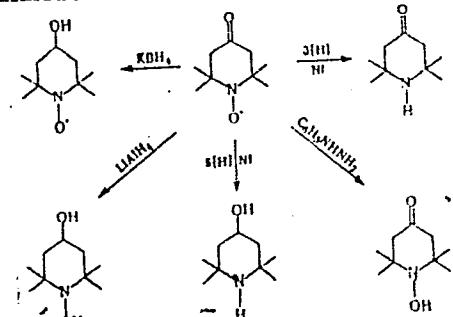
ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fizikii AN SSSR)

TITLE: Thermochemical study of some free radicals and their hydrides

SOURCE: AN SSSR. Doklady, v. 168, no. 1, 1966, 104-105

TOPIC TAGS: free radical, hydride, thermochemistry

ABSTRACT: All the investigated compounds were prepared by the following scheme:
 The compounds were purified in Ar atmosphere (recrystallization, chromatography, sublimation in vacuo) and then submitted to a calorimetric investigation. The thermochemical properties of the compounds are given in Table 1. The paper was presented by Academician V. N. Kondrat'yev on 6 Aug 65. Orig. art. has 1 formula and 2 tables.



Card 1/2

UDC: 541.11+547.823

L 41215-46

ACC NR: AP6015090

Table 1. Thermochemical properties of the compounds investigated ((kcal/mol)

Compound	m.p. °C	Q comb.	ΔE°	ΔH°	$\Delta H_{\text{form}}^{\text{(solid)}}$	$\Delta H_{\text{form}}^{\text{(gas)}}$
A	156,5	1387,64 ± ±0,33	1387,96 ± ±0,33	1388,98 ± ±0,33	106,52 ± ±0,33	82,52 ± ±0,45
B	71,5	1366,27 ± ±1,82	1365,67 ± ±1,82	1367,45 ± ±1,82	93,87 ± ±1,82	69,61 ± ±2,21
C	90,5	1335,76 ± ±0,1	1335,14 ± ±0,1	1336,77 ± ±0,1	90,39 ± ±0,1	71,24 ± ±1,12
D	36,6	1320,79 ± ±1,55	1320,15 ± ±1,55	1321,63 ± ±1,55	71,36 ± ±1,55	51,45 ± ±1,55
E	35,5	1345,92 ± ±0,82	1345,37 ± ±0,82	1347,26 ± ±0,82	70,90 ± ±0,82	65,37 ± ±1,47

A = 2,2,6,6-tetramethyl-1,4-dihydroxypiperidine; B = 2,2,6,6-tetramethyl-4-hydroxypiperidine-1-oxyl; C = 2,2,6,6-tetramethyl-1-hydroxy-9-oxopiperidine; D = 2,2,6,6-tetramethyl-4-oxopiperidine-1-oxyl; E = 2,2,6,6-tetramethyl-4-oxopiperidine.

SUB CODE: 07/ SUBM DATE: 30Jul65/ ORIG REF: 005

Card 2/2 MLP

KAPITANOV, Yu.T.; SERDYUKOVA, A.S.; KORENKOVA, A.P.; LEEDEV, Yu.A.

Adsorption of the short-lived products of radon decomposition from turbulent air flow by the surfaces of mine rocks.
Izv. vys. ucheb. zav.; geol. i razv. 7 no.1:126-136 Ja '64
(MIRA 18:2)

1. Moskovskiy geologorazvedochnyy institut imeni Ordzhonikidze.

KALININ, Nikolay Georgiyevich; LEBEDEV, Yuriy Alekseyevich; LEBEDEVA, Volga Ivanovna; PANOVKO, Yakov Gilelevich, prof. doktor tekhn. nauk; STRAKHOV, German Ivanovich; VENGRANOVICH, A., red.; PILADZE, Ye., tekhn. red.

[Structural damping in rigid joints] Konstruktsionnoe dempirovanie v nepodvizhnykh soedineniakh. Riga, Izd-vo Akad. nauk Latviiskoi SSR, 1960. 169 p. (MIRA 14:11)

1. Chlen-korrespondent AN Latviyskoy SSR (for Panovko).
(Damping (Mechanics))

LEBEDEV, I. A.

PHASE I BOOK EXPLOITATION SOV/3927

Akademiya nauk Latviyskoy SSR. Institut mashinovedeniya

Voprosy dinamiki i prochnosti; sbornik statey; vyp. VI (Problems of Dynamics and Strength; Collection of Articles, No. 6) Riga, Izd-vo AN Latviyskoy SSR, 1959. 159 p. Errata slip inserted. 1,500 copies printed.

Ed.: A. Vengranovich; Tech. Ed.: A. Klyavinya; Editorial Board: Ya.G. Panovko, Corresponding Member, Academy of Sciences Latviyskaya SSR, Professor, Doctor of Technical Sciences (Resp. Ed.); S.B. Aynbinder, Docent, Candidate of Technical Sciences; and N.G. Kalinin, Docent, Candidate of Technical Sciences.

PURPOSE: This book is intended for mechanical engineers and technical workers.

COVERAGE: The book presents 10 articles on problems related to shock absorbers, railroad cars, thin shelled bars, crane structures, automatic balancing, oscillations, and the performance of mechanical presses. The authors are technical or scientific workers at

Card 1/3

Problems of Dynamics (Cont.)

SOV/3927

the Institut mashinovedeniya Akademii nauk Latviyskoy SSR (Institute of Science of Machines of the Academy of Sciences Latvian SSR), at the Rizhskiy politekhnicheskij institut (Riga Polytechnic Institute), and at the Rizhskoye Krasnoznamennoye vyssheye aviatsionnoye voyennoye uchilishche imeni Leninskogo komsomola (Riga Red Banner Higher Military Aviation School imeni Leninskij Komsomol). No personalities are mentioned. References are given following each article except one.

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Problems of Dynamics (Cont.)

SOV/3927

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AVAILABLE: Library of Congress

Card 3/3

AC/rn/jb
8-4-60

LEBEDEV, Yu.A.

Efficient technological process for the founding of diesel
sleeves. Lit.proizv. no.7:14-15 Jl '61. (MIRA 14:7)
(Founding) (Diesel engines)

LEBEDEV, Yu. (Riga)

Structural damping in riveted joints. Vestis Latv ak no.12:27-34
'59. (EEA 9:11)

1. Akademiya nauk Latviyskoy SSR, Institut mashinovedeniya.
(Damping (Mechanics))

KALININ, N. (Riga); LEBEDEV, YU. (Riga)

Structural damping in a thin-walled girder. Vestis Latv ak no.1:
47-56 '60. (EEAI 9:11)

1. Akademiya nauk Latviyskoy SSR, Institut mashinovedeniya.
(Girders)

GRIGOR'YEVA, V.N.; SHEVCHENKO, M.G.; SHILLINGER, Yu.I., kand. med. nauk; ALEKSINA, L.I.; LEBEDEV, Yu.D., red.; SHTENBERG, A.I., prof.; BONDAREV, G.I., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[Collection of directives on the control of chemical poisons used in agriculture] Sbornik ofitsial'nykh materialov po kontroliu za iadokhimikatami, primenyaemymi v sel'skom khoziaistve. Moskva, Medgiz, 1961. 439 p. (MIRA 15:4)

1. Gosudarstvennaya sanitarnaya inspeksiya SSSR (for Grigor'yeva, Shevchenko). 2. Institut pitaniya Akademii meditsinskikh nauk SSSR (for Shillinger). 3. Moskovskiy nauchno-issledovatel'skiy institut sanitarii i gigiyeny in. F.F.Erismana (for Aleksine).

(Agricultural chemicals)

POPOV, Konstantin Viktorovich, professor; LEBEDEV, Yu.D., redaktor;
BALLOD, A.I., tekhnicheskiy redaktor.

[Hydraulic structures] Gidrotekhnicheskie seeruzhemiia. Izd.
2-ee, perer. i dep. Meskva, Gos.izd-vo sel'khoz. lit-ry, 1956.
519 p. (Hydraulic structures) (MLRA 9:6)

2. АПОЛЛОСОВ, В.А.

APOLLOSOV, Vasiliy Mikhaylovich, dots., kand.tekhn.nauk; SURIKOV, Mikhail Aleksandrovich, kand.tekhn.nauk; LEBEDEV, Yu.D., red.; EL'SHTEYN, V.L., red.; PEVZNER, V.I., tekhn.red.

[Mechanization, production, and organization of hydraulic engineering work] Mekhanizatsiya, proizvodstvo i organizatsiya gidrotekhnicheskikh rabot. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 719 p.
(Hydraulic engineering) (MIRA 11:4)

~~LEBEDEV, Yu.D.; VYSHEGORODTSEV, Ya.S.~~

Uninterrupted operation of 10GK gas-driven compressors.
Gaz. prom. 4 no. 7:46-49 Jl '59. (MIRA 12:10)
(Gas, Natural--Pipelines) (Compressors)

JIN 49

USSR/Medicine - Sanitation
Water, Pollution

"Protection of Reservoirs From Pollution by Industrial Sewage, the Most Important Problem of Industrial Organizations," Yu. D. Lebedev, Dep Sanitation Organization Inst. USSR, 1½ pp.

Chief Sanitation

"GIG-1 San" No 6
"GIG-1 San" No 6
"GIG-1 San" No 6

and kray must drew up a
every republic, oblast and kray must drew up a
oblast and kray must drew up a
study of the health
concrete plan of protecting by
of populations near polluted areas
of populations that the problem can be solved by
is no doubt that pollution can be solved by
reservoirs against pollution plans for improving
implementing the government plans for improving
the sanitary conditions of water supplies.

65/4957

LEBEDEV, Yu. D.

LEBEDEV, Yu. D.

Principal tasks of the state sanitary inspection in 1952. Gig. sanit.
(CIML 21:5)
Moskva no.2:3-7 Feb 52.

1. LEBEDEV, YU. D.

2. USSR (600)

4. Second joint session of members of the All-Union State Sanitary Inspection and
of Sanitary-Antiepidemiological services. Gig.i san. 17, No.9, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

EXCERPTA MEDICA Sec. 17 Vol. 3/7 Public Health July 57

2229. LEBEDEV Yu. D., PEROTSKAYA A. S. and GLEBOVA L. F. Min. of Health and Inst. of Gen. and Communal Hyg., Acad. of Med. Sci. of the USSR. Moscow *Practice of sanitary control of atmospheric air in industrial cities in the USSR* (Russian text) Tezisy dokladov na XIII vsesoyuznom s'ezde gigienistov, epidemiologov, mikrobiologov i infektsionistov (Moscow) 1956, Kniga 1 (65—67)

In the period 1948—1955 some measures were taken in the campaign against atmospheric air pollution in the cities of the USSR. A number of important regulations were issued to prevent pollution of atmospheric air in industrial cities. Cooperation of physicians and engineers has already produced some positive results. Systematic laboratory examinations have shown a marked decrease of pollution of the atmospheric air in Moscow, Leningrad, Baku, and the large industrial centres of the USSR. The immediate problems in the field of sanitational protection of atmospheric air are: (a) further organizational strengthening of the state's sanitary control of protection of the atmospheric air of cities; (b) concentration of the whole complex of sanitational protection of the air on the more important branches of industry (thermo-electrical plants, chemical industry plants, cement factories, heavy and light metallurgy); (c) finding out of new sources of pollution of atmospheric air (radioactive aerosols, new chemical products); (d) organization of study of hygienic effect of realized measures of the campaign against atmospheric air pollution in the cities; (e) employment of more complete technological industrial processes to prevent pollution of air with harmful substances.

Vavilin — Moscow

Hygienic science and sanitary practice in preservation of
city atmosphere. Yu. D. Lebedev, M. K. Nedogibchenko,
and L. F. Glebova. Dzherzareschi No. 1, 3, 1959.

Muk

The general problems of city air pollution are discussed.

The following topics are considered: the basic principles of

the hygienic science of city air and its basic features in view

of the following factors: climatic, geographical, and industrial.

contaminants in city air are given: SO₂ 0.5, 0.15; Cl 0.1, 0.03; HS 0.03, 0.01; given:

SO₂ 0.5, 0.15; CO 6.0, 2.0; N oxides 0.5, 0.15; general toxicic

0.5, 0.15; dust 0.15, 0.05; P oxides 0.15, 0.05; Mn

dust 0.5, 0.15; soot 0.15, 0.05; P compds. 0.15, 0.01; H₂S 0.1, 0.01; Ph

compds. 0.03, 0.01; F compds. 0.01, 0.001; Pb 0.05, 0.01; PhOH 0.3, 0.1; urea 0.05, 0.01; Cu 0.05, 0.01; Cd 0.005, 0.001; Mn 0.01, 0.001.

3

M. K. Nedogibchenko

et al.

LEBEDEV, Yu. D.

Some hygienic standards in planning and building hospitals in
Sweden and France. Gig. i san. 22 no.3:55-59 Mr '57. (MLRA 10:6)

1. Zamestititel' glavnogo gosudarstvennogo sanitarnogo inspektora
SSSR.

(HOSPITALS

planning & building, hygienic standards in Sweden
& France)

(HYGIENE

hygienic standards in planning & building of hosp. in
Sweden & France)